Service Date: October 23, 1984

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA

* * * * *

IN THE MATTER of the Application	)	UTILITY DIVISION
by MONTANA POWER COMPANY for	)	
authority to establish increased rates	)	DOCKET NO. 83.9.67
for electric service in the State of	)	
Montana.	)	ORDER NO. 5051g

ORDER ON MOTIONS FOR RECONSIDERATION
OF ORDER NO. 5051(f)
RATE DESIGN

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JOHN B. DRISCOLL, Commissioner
HOWARD L. ELLIS, Commissioner
CLYDE JARVIS, Commissioner
DANNY OBERG, Commissioner

<u>Background</u>

1. On August 3, 1984, the Commission issued Order No. 5051d. This order set forth the cost of service approach that MPC was to use to compute reconciled class revenue requirements. In the order, the Commission directed the Montana Power Company to file rate

schedules which reflect an increase in annual electric utility revenues of $4,106,915. Rates were to increase by a uniform percent for all but the irrigator class.

2. Pursuant to later Commission staff and Company communication, which revealed that the Final Order would result in a rebate, the Commission directed the Montana Power Company to defer any rate changes until the present order was issued.

3. On August 21, 1984, the Commission received the Montana Power Company's Motion for Reconsideration of Order Nos. 5051c and 5051d.

4. On September 21, 1984, the Commission issued Order No. 5051f in the matter of MPC's Motion for Reconsideration and Rate Design.

5. On October 9, 1984, the Commission received the Montana Power Company's and District XI Human Resource Council's Motions for Reconsideration of the Rate Design portion of Order No. 5051f.

Introduction

6. This order, in turn, addresses MPC's and District XI Human Resource Council's Motions for Reconsideration. Additional issues arising from the Company's October 8, 1984 Work papers are also addressed.

MPC: ISSUES RECONSIDERED

7. Seasonal Definition: In this issue (Finding 44), MPC states that the Order incorrectly defined the start of the winter season as "roughly December 20 each year."

8. Finding No. 44 states that the seasonal billing cycles begin on roughly December or March 20 of each year. The billing cycles, in turn, capture services rendered beginning roughly one month earlier: that is, a December 20 billing corresponds, roughly, with a season beginning November 20. The following excerpt from Finding No. 44 should make the distinction clear:

The winter season for this and subsequent rate schedules should begin with the December billing (roughly December 20 each year) and end with the March billing cycle (roughly March 20 each year); all tariff sheets should reflect this generic seasonal definition [emphasis added] .

9. Demand Metering Two or More Residential Apartments. In this issue (Finding No. 50), MPC requests that "The order should make clear that demand metering only dictates the application of the general service schedule when usage justifies it (that is, demand in excess of 10kw)."

10. The Commission interprets this request to address the concern of which tariff is applicable to a new customer with two or more residential apartments. Until such time the 10kw breakpoint is replaced with an economically rational breakpoint, it should also be used with "two or more residential apartment" customers. That is, this type of customer will be billed on either the residential or general service tariff, and only on the latter if demand in excess of 10kw is expected.

11. The Irrigation Class' Revenue Requirement . In this issue (Finding No. 73), MPC states that the Commission has incorrectly explained the source of this class' revenue requirement decrease. MPC states that it was not the "Base-Peak" (emphasis added) cost study, but rather how marginal demand costs were allocated (i.e.,

average of eight CP and NCP) that explains the decrease.

12. The Commission finds that MPC has misconstrued the Commission's finding and, in addition, has not fully illuminated the source of variation in this class' decreased revenue requirement. These points are addressed in turn .

13. First, the Commission finds necessary a reiteration of Finding No. 73.

> Because of the nature of the Power cost of service study adopted by the Commission, there resulted a substantial decrease in this class' annual revenue requirement. This result, in turn, requires the Commission to make a number of revisions to the tariff option that resulted from Phase II of Docket No. 80.4.2 (Order No . 4714d) . (Emphasis added).

14. MPC should note that the Commission referred to the "Power Cost of Service Study", not the "Base Peak" study as alleged: The "Base Peak" approach is but one portion of the Power Cost of Service Study [see for example Findings No. 112 and 135 of Order No. 5051d]. That is, the Power cost of service study includes analyses in addition to the estimation of generation related marginal energy and demand costs -- the "Base Peak" portion.

15. Second, a significant change occurred in the relative loss-of-load probabilities (LOLP) between Docket No. 80.4.2 and the present docket.1 In addition, the summer season was increased from six to eight months. It is these sorts of changes, which were included in the Power Cost of Service Study, in addition to the two factors mentioned by MPC, that, in part,

1 For example, other things being equal (e.g., demand costs between Docket Nos. 80.4.2 and 83.9.67), the generation and transmission unit marginal cost of $145.06 (secondary

> voltage) results in a summer cost of $58.02/ kw assuming a 40 percent summer LOLP (Docket No. 80.4.2). With a 13 percent summer LOLP (Docket No. 83.4.67) this figure falls to $18.86/kw. Moreover, as noted earlier, the former cost is for a six month summer period while the latter is for an eight month summer period.

explain the irrigation class' reduced revenue requirement: Both of these changes (i.e the 87 percent winter LOLP and four month winter season) were proposed by MPC's expert witness Mr. LaCapra.

16. <u>Reactive Power</u>. In this issue (Finding No. 97), MPC states that the Commission has essentially raised an issue without any support of the docket. MPC also states that the issue concerns all customer classes and not just the industrial class.

17. The Commission denies MPC's request to delete this Finding. The Commission's concern here is that a type of cost, which was not accounted for in the present docket, should be addressed in the Company's next filing including cost of service testimony. The Commission finds that to the extent reactive power costs are caused by each class, such cost causation should be reflected in the Company's next cost of service analysis. The Commission expects MPC to include such an analysis in its next cost of service/rate design proceeding.

MPC: ISSUES CLARIFIED

18. <u>General Issue</u>. In this second part of its Motion, MPC requests further explanation of a number of "confusing" issues. The reason for these requests is that, in the Company's estimation, the Commission's rate design decisions are confusing in that they do not accord with the results from the marginal cost study.

19 MPC cites two reasons for its finding that order 5051f is confusing (assumedly, MPC did not find the Commission's responses

to its motions on cost-of-service issues "confusing"). The first is the Commission's reliance....-on "moderation" of cost based rates. The second is that "...many findings do not adequately document the reasoning behind the finding (sic) or do not provide guidance for the next step through the 'moderation' process."

20. Before responding to MPC's specific clarification issues, the Commission would point out that a number of different criteria are considered in cost of service and rate design analysis and decisions. Those criteria are summarized by Professor James Bonbright in his well-known 1961 text, Principles of Public Utility Rates (see Exhibit No. 63, pp. 32, 33). In this text, Bonbright enumerates his rate making criteria broken down into primary and secondary categories. Two of Bonbright's secondary criteria include:

The related 'practical' attributes of simplicity, understandability, public acceptability, and feasibility of application.

Stability in the rates themselves, with a minimum of unexpected changes seriously adverse to existing customers. (Ibid Exh. No. 63)

21. The Commission would also point out that different cost of service studies generate different revenue impacts on the various customer classes. This fact is clearly evident in the present docket. The expert witnesses supporting cost studies in this docket have different opinions of how Bonbright's secondary criteria (e.g., rate stability, acceptability and under standibility) should be implemented.

22. MPC's expert witnesses, Mr. Haffey and Mr. LaCapra, both expressed their individual opinions in this regard.

23. Mr. Haffey testified as follows:

Q. Mr. Haffey, just a couple of final questions. With regard to page 8 of your testimony. The last sentence there where you talk about proposing certain moderations to the assignment of cost responsibilities.

What are those modifications? Do they include anything other than the plus or minus 10 percent that you talk about on the next page?

A. No, that's the modifying factor, the moderating factor that I was thinking of there.

Q. And with respect to your plus-or-minus-10-percent modification, you mention customers' sensitivity to a one-time increase, or initial rate effect.

What analysis have you done to enable you to come to that determination? Any other than experience, based upon experience?

A. Would you refer me to where I mentioned that?

Q. It's on page 9, line 18 is where you use the word "sensitivity.”

A. I'm referring to my sensitivity, to the Company's sensitivity to one-time or initial effects of rate changes and referring really to the context of gradual or smooth changes in rates rather than one-time large changes. So, I'm really not referring to the customer's sensitivity, but rather the Company's. The Company is sensitive to the problems associated with that. (emphasis added) (Tr . pp . 3440, 3441)

and,

Q. Mr. Haffey, let me put it this way: We're clearly talking about policy here and policy that the Company is recommending to the Commission. The Company is recommending to the Commission as a matter of policy that this responsibility not be fully shouldered by these two classes immediately, and my question is, is the Company recommending, or going to recommend to the Commission, a time frame within which that responsibility should be fully shouldered? (emphasis added)

A. The Company hasn't recommended one. I would expect in over the course of the next two or three rate proceedings that would be a time frame that would be reasonable to do that.

The whole idea is to have -- One of the principal ideas is to have a smooth, manageable change in the prices of electricity. There are various matters that pull both the utility in its requests and Commissions in their decisions away from smooth changes that are extraneous or that are outside the control of either the Companies or the Commissions. (emphasis added) (Tr. p. 3448)

24. Mr. LaCapra testified as follows:

Q. I'd like to talk briefly about your recommendations for moderation, the plus or minus 10 percent.

From a purely economic point of view, is there anything wrong with having all rates fully reflect costs without moderation ?

A. No, there is no economic constraint that requires the moderation. It's purely a concern of equity, continuity, and the relationship to the historical price level. It's not an economic consideration. (emphasis added) (Tr. p. 4030)

and,

Q. What does that do to any idea of rate stability?

A. Well, rate stability is not necessarily a function of maintaining a constant rate. Rate stability is generally defined, and I would certainly define it as, that which is in the analyst's power. . .

By rate stability, I believe I and most analysts would say things that are really in our power to control. (Tr.p . 4051)

25. That is, MPC's cost of service study created customer impacts/problems that the Company felt should be "moderated." Similarly, the Commission has concern for moderating rate impacts and exercised that concern in its decision.

26. In the Company's opening remark regarding the issues requiring further explanation the Company stated:

Second, many findings do not adequately document the reasoning behind the finding or do not provide guidance for the next steps through the "moderation" process.

(emphasis added)

27. The Commission finds this criticism peculiar as it is equally

applicable to the Company's own cost of service study as evidenced from the following exchange between Mr. Kemmis and Mr. Haffey on the Company's proposed moderation:

Q. Concentrating again on the question of specific class responsibilities. Now, my understanding is that the Company has attempted to determine what are appropriate responsibilities for each class but has recognized, or at least put forward the proposition, that a one-time movement to assumption of those responsibilities would be too sudden.

I take it that there must be, as a matter of policy, some outside time frame that would be too long, just as this would -- just as a one-time move would be to agree that there must be some time that would be too long for full assumption of each class's responsibilities .

Does the Company have, as a matter of policy, a position on what would be too long a time frame for full assumption of each class's responsibility?

A. I don't think that we've identified a time period that would be too long, class by class, for the classes to assume what we ~y as their full-cost responsibility.

And this answer is really related -- or this discussion is related to the discussion that I think Mr. Doubek and I had that the load characteristics change over time so that those cost responsibilities might change, proportionate cost responsibilities over time of each class. In the last rate structure proceeding for this company, if my memory is correct, we talked about a 5- or 10-year period, and I think a 5-year period, with specific regard to the irrigation class as the example of a class that I would have a particular problem as a time period during which the movement could be made. But we haven't identified a specific time period that would be too long.
(emphasis added) (Tr. pp. 3445-3447)

28. That is, the Company has apparently not considered the next steps through the moderation process for its own proposed class revenue requirement moderation, a shortcoming it now finds in the Commission's rate design moderation decisions. The Commission did not adopt a specific implementation/moderation process for the future. Rather, the Commission chooses to apply moderating judgements to the record evidence in subsequent cases.

29. The Level of Customer Charges In this issue (Findings No. 47 and 62), MPC requests the Commission to ". . .explain its reasoning behind the level of customer costs (sic). . . . " The

cited findings reference the residential and general service classes.

30. The Commission acknowledges the Company's observation that the resulting service charges do not reflect an equal percent of their respective unit marginal costs. In the Commission's judgement, however, these rates reflect concern for Bonbright's rate making criteria . The $2.OO/mo. residential service charge, if increased, would be at the sacrifice of the energy price signal. Moreover, the Commission is uncertain of customer acceptability of higher service charges . The Commission finds that a $3.OO/mo. customer charge would be acceptable by most general service customers.

31. Indeed, the Commission is surprised by this motion as it closely adheres to the position of the Company's expert witness (although the range differs) Mr. LaCapra, as evidenced from the following exchange:

Q. Do you have any opinion about, in absolute dollar terms, how large a customer charge should be?

A. Well, basically a customer charge, I think, is most appropriate in the $3 to $6 range, depending upon the nature of service.

Q. If you were faced with a situation where you could not reflect marginal costs in a tail-block rate without giving up or moderating a customer charge, would you do so?

A. I would moderate the customer charge and abandon my rate making concern rather than move the tail block away from marginal energy costs. [Tr. p. 4054]

32. Mr. LaCapra, however, also indicated that a customer charge should be maintained for all customers:

Q. Thank you. If we could go back just briefly to your prioritizing of costs that should reflect full marginal costs. I think you gave that list yesterday, but in previous testimony, you seemed to indicate that you deviated from that priority list for small customers.

A. Yes. I deviated from the list for rate-design purposes I think is the characterization I would use. On a theoretical basis, one would want to preserve his energy cost, nextly, his production capacity cost, then his delivery system, his T&D, and then the customer cost. This is, I think, a proper ordering of bill-component elasticity.

Now, for rate-design purposes, I believe it is appropriate to

include a customer charge for all customers. As a practical matter, it's only the smaller customers where it's significant enough to isolate as a part of the rate. So, in the practical application of rate design, I included a customer charge. The theoretical interpretation and the practical application had that one difference. I felt that a customer charge was a reasonably important rate-design feature to maintain. (Tr. pp. 4284, 4285).
33. Residential Seasonal Energy Differential. In this issue (Finding No. 48), MPC requests the Commission to ". . .explain why it moved from a 20 percent to a 30 percent summer/winter differential for the residential class, the actual differential "justified," and how soon the actual differential should be incorporated into the rate design."

34. There are three separate requests in this issue. Regarding the first, the Commission increased the differential because it was justified on economic grounds. Two economic justifications, that come to mind, follow. The first (not necessarily in order of importance), is evident from the Company's Statement L (Appendix A, p. 4 of 6): the Company's own finding is that the ratio of winter to summer marginal energy costs increases from 1~31 to 1.56 based on 5, 10 and 21 year averages: average trends are affected by marginal trends. The Commission would also refer the Company to Finding of Fact No. 78 (Order No. 5051d) in this regard.

35. The second economic justification derives from the Power cost of service study: Simply put, the ratio of seasonal unit marginal energy costs (energy and demand) in the winter to the summer equals about two to one.

The following table supports this finding:

Table 1 Calculation of The Seasonal Marginal Cost per KWH for Residential Customers

	Season	
Component	Winter	Summer
Energy		
(1) KWH(1)	677,522,000	993,142,000
(2) Rate(2)	3.68¢	3.68¢
(3) Revenue(lx2)	$24,932,810	$36,547,626

Demand Revenue

(4) Generation(3)	$30,993,771		$ 2,459,858
(5) Transmissions(4)	$15,908,712		$ 1,262,614
(6) Distribution	$ 9,098,242		$18,196,485
(7) Sum(3+4+5+6)	$80,933,535		$58,466,583
(8) Cost/KWH (7÷1)	$ 0.1194		$ 0.0588
(9) Ratio		2.03:1.0	

(1) See page 2 of MPC's August 20, 1984 Marginal Cost of Service Work papers and pages 27 and 29 of the MPC's Supplemental Work papers Normalized TDAC.

(2) See page 1 of the MPC's August 20, 1984 Marginal Cost of Service - 3 Work papers.
(3) Ibid, p. 3.
(4) Ibid, p. 4.
(5) Ibid, p. 5. These costs were spread evenly to each month.

36. The Commission did not establish an implementation schedule. Rather, the Commission will consider the issue further, based upon the record evidence in subsequent cases (also, see Finding 28 above).

37. General Service and Electric Contract Rate Design. In this issue (Findings No. 63 and 91), MPC raised four separate questions; consequently, the entire motion is repeated below (and the individual points numbered):

> The Base-Peak marginal cost-of-service study ordered by the PSC in 5051(d) provides the portion of class revenues related to demand: (1) The MPC requests the PSC to explain why the amount of demand-related revenue is then recalculated in this Finding for general service and industrial contract classes. (2) If for "moderation" purposes, then how quickly should the rate design move to incorporate full reliance on the marginal cost-of-service study? (3) Upon what basis was it determined to shift ten percent of the newly determined demand revenues to energy? (4) Why were demand revenues shifted to energy when the marginal cost study already indicated a far higher level of demand revenues should be collected?

38. The first and fourth points raised/questioned shall be addressed first. As the Company well knows, it would be a mere coincidence if the revenues generated by the Power Cost of Service study exactly matched the allowed revenue requirement. The fact

that the allowed revenue requirement in this docket is less than total marginal cost revenues creates the reconciliation issue raised in Order No. 5051d. Different options exist to recover each class' revenue requirement from its various billing determinants.

39. At one extreme, one could take an equi-percent of the rates set forth in Table 1 of Order No. 5051d. The impact of this decision on customers, given the Company's new LOLP's, is substantial (I. e., the LOLP's from the present docket relative to those out of Docket No. 80.4.2). Clearly, some sort of rate impact moderation was appropriate.

40. The Commission chose to moderate the impacts from the Power Cost of Service study, but by a different method than MPC proposed to moderate the impacts from its cost of service study.

41. Essentially, demand revenues were shifted to the energy function and the seasonal differential in the demand charges was increased for two reasons. First, the energy function is more important than the demand function, in terms of an ordinal ranking of their relative elasticities of demand. This, in fact, is the Company's own position in this docket, as evidenced from the following testimony (also see MPC Data Response No.
13-50 to the Commission staff):

Q. Turning to the area of customer costs, in discussing rate design you set priorities for which prices should be preserved; is that correct?

A. Yes, sir.

Q. Your first priority is marginal energy costs at all levels and for all classes?

A. Yes, sir.

Q. Your second is marginal production capacity costs; is that correct?

A. Yes, sir.

Q. And you indicate that as your third priority, that it is important that customer charges be preserved; is that correct?

A. Yes, sir. (Tr. pp . 3716, 3717)
and,

Q. I forget whether this is page 20 of your rebuttal testimony, but where you discuss setting rates within a rate class. And you indicate that you would first collect the energy marginal cost, is that correct?

A. Yes, sir, that's correct. (Tr. p. 3822)

42. That is, it is most important to first recover marginal energy costs and next marginal demand costs.1 Consequently, it makes economic sense to shift demand revenues to the energy function even though the marginal cost study indicates " . . . a far higher level of demand revenues should be collected. . . . " Similarly, from the Company's October 8, 1984 Work papers (Marginal Costs page 2, and the tariff sheets in the Letter of Transmittal), it is clear that the marginal costs of energy exceed the tail-block rates for either the general service or electric contract classes: but, the Commission chose to moderate the move in the direction of cost-based rates.

1.The Company (Mr. Lacapra) provided an enlightening explanation as to why some have incorrectly drawn the conclusion that the demand for capacity is more elastic than the demand for energy:

Q. Okay.

In former testimony, I think in response to Mr. Morrell's questions, you seemed to suggest that you believed the demand component is more elastic than the energy component, at least for industrial customers. Is that a fair statement of your testimony?

A. No, I believe I said it in the reverse.
Q. In your opinion, then -
A. The energy is the most elastic billed component.
Q. Do you want to expound on that?

A. It would be helpful.

> The, in the context of that discussion, the conservation of energy is a matter that I believe has not been attempted with the same vigor as the conservation of demand to most industrial customers, and I believe this gave the apparent perception that demand is relatively elastic because they can do something about it and energy is not, but I believe that's only the perceived situation, and the reason why is because the pricing structure has forced the industrials to behave that way in the sense that we have given relatively significant demand charges and ratchets and minimums and, in all jurisdictions, relatively low energy charges, and in this jurisdiction we're talking about a few mills of energy and a number of dollars of demand charge with ratchets and contracts - well, not ratchets in this jurisdiction, but contract minimums. So to the extent that they have made great moves in controlling their demands is not because they're relatively easy to do but our price signal has told them that that's the intelligent thing to do if they want to save on their bill. (emphasis added) (Tr. pp. 4076-4077)

43. The Commission increased the differential in the demand charges to reflect the results of the Power Cost of Service Study.

44. Regarding the third point in this issue, the Commission chose to shift only 10 percent of the demand revenues to the energy function for moderation reasons. The percent of revenues that could be shifted ranges from zero percent upward. A 10 percent shift seemed to recognize the Company's (and this Commission's) concern for emphasizing the importance of the energy rate element.

45. Regarding the second point in this issue, the Commission is unsure how fast the rate design will ". . .move to incorporate full reliance on the marginal cost-of-service study. . . . " Such decisions will rest on the record evidence in subsequent rate

cases.

46. Irrigation Rate Design. In this issue (Findings No. 76 and 77), MPC raises four separate points (each is numbered):

(1) If the rate design for irrigators is ". . .clearly not compensatory in terms of recovering unit marginal costs", it would seem to indicate a mismatch between the methodologies of the revenue allocation procedure (based on prescribed loads and the marginal cost-of-service study) and the rate design approach. The Commission should B. indicate how this discrepancy will be resolved in the future. (2) Particularly, the Commission should indicate how a demand charge will likely be added. (3) Is this in anticipation of a higher overall revenue requirement? (4) Will the cost study be altered to shift costs to irrigators or will the energy charge be reduced?

47. Regarding the first point, the Commission has already indicated, that only by coincidence will marginal cost revenues equal the Company's allowed revenue requirement. The reconciliation factor in the Company's October 8, 1984 Work papers equals about 46 percent. The Commission would note that rates, out of this docket, generally will not equal unit marginal costs.

48. The Commission does not find that, as MPC states, a discrepancy or mismatch exists " . .between the methodologies of the revenue allocation procedure. . .and the rate design approach." The irrigation class' revenue requirement has decreased, in part, due to the changed LOLP and seasonal definition from the Company's own analysis. In keeping with the Commission's position, which is apparently the same as the Company's (see Finding No. 41 .above) on the importance of energy rates, relative to demand rates, the Commission chose to have an irrigation rate structure without demand charges. Additionally,

the Montana Consumer Counsel proposed only energy rates for this class.

49. Regarding the other three points, the Commission will consider adding a demand charge after the Company and other interested parties address the issues raised in Finding No. 77 of Order No. 5051f. To the extent the tariffed energy rate does not exceed its unit marginal cost, the Company, given LaCapra's testimony (see Finding No. 41 above), should not be distressed by the present rate design.

50. Subsequent actions of the Commission on irrigation rate design will depend upon record evidence in subsequent cases.

51. Electric Contract Minimum Monthly Bills. In this issue (Finding No. 94), the Company requests the Commission to reconsider a ". . .uniform minimum bill provision no less than the current demand charge per KW times the contract demand."

52. The Commission denies this request for the reasons set forth in Findings No. 94 and 95 of Order No. 5051f. Until such time the Company and interested parties have addressed the Commission's concerns, the Commission finds no reason to interfere with and change existing contracts that, assumedly, were not signed under duress by either the Company or customer.

53. Other Concerns: The Order No. 5051c Anaconda Adjustment. In this issue, the Company requests confirmation concerning the Commission's position, on the issue of the Anaconda Company 10/12ths adjustment. In the Commission's judgement, at least three options exist for treating the Anaconda deficiency adjustment in the cost of service study.

54. The first option would be to include Anaconda's actual KW

demand only in the cost of service study. But this option would also require the Commission to go back to Order No. 5051c and reduce the electric utility revenue requirement by 12/12ths of the deficiency payment. The Commission, however, is foreclosed from this option. A second option would be somewhat forward looking, and would involve setting the Anaconda load at roughly the 38 MW MPC's witness Lewis says Anaconda's load would equal if mining resumed (see Order No. 5051c, Finding No. 164). A third option would involve reducing Anaconda's net contract load (contract load of 65,000 minus actual demand) by 10/12ths.

55. The Commission finds this latter option to be most reasonable, and consistent with its findings in Order No. 5051c. Corresponding with this finding, the Commission finds that the Anaconda deficiency amount of $1,672,633 (see October 8, 1984 Work papers, Derivation of Rates, page 11 of 62) should be a reduction, in the cost of service study, to the allowed revenues of $176,649,300 (Ibid, page 2, Marginal Costs Tab).

DISTRICT XI HUMAN RESOURCE COUNCIL (HRC)

56. Introduction. Findings 45 through 49 of Order No. 5051f set forth the Commission's decision on residential rate design. The Commission chose to tariff a flat, seasonally-differentiated energy rate with a monthly service charge of $2.00. HRC proposed an inverted energy rate with a minimum bill in lieu of a monthly service charge.

57. HRC filed a Motion for Reconsideration requesting that the MPSC reconsider its decision to implement a flat rate. If the Commission decides to retain the flat rate, HRC requests that the Commission review and modify the supporting discussion found in Order No. 5051f.

58. The HRC Motion argues five points . 1) Whereas the Order cites moderation as an objective, HRC argues that now is an opportune time to implement inverted rates (p. 1-2). 2) Even though all consumption should face marginal prices, an initial block of consumption is relatively inelastic and can be lowered from marginal costs without causing considerable distortion. "Having all residential rates deviate the same amount from long run costs is not the most effective way to move towards LRIC pricing (p. 2-3)." 3) Inverted rates can be structured without any shift of revenue requirement from one class to another (p. 3). 4) Inverted rates are more equitable than seasonal rates because they are applied to "those whose usage is increasing and causing the higher costs while not penalizing those with more stable usage who are not responsible for the higher demand costs to start with (p. 4)." 5) Whereas the Order cites the difficulty in verifying minimum bill revenues, HRC argues that it is a relatively simple calculation (p. 3-4).

59. The Commission denies the request to alter the residential rate structure provided in Order No. 5051f. The following discussion supports this decision.

60. Ramsey Pricing and the Rule of Equity. First, it is essential that it be understood that the only economic basis for inverted or declining price schedules is Ramsey Pricing -- occasionally referred to as the inverse elasticity principle. 1 The concept is pure, well accepted, and widely used: when deviating a set of prices from a corresponding set of marginal costs, the resulting welfare loss will be minimized by deviating in inverse proportion to own price elasticity.

61. To argue, as HRC does in its motion (p. 4, l 9-12), that those customers with increasing loads are responsible for a higher level of costs, is incorrect. 2 It is widely accepted that the

opportunity costs associated with all otherwise identical consumption is identical -- regardless of vintage.

62. In situations, such as that found in Docket No. 83.9.67, where marginal costs are greater than average unit revenue requirement, Ramsey Pricing would suggest, as HRC proposed, downward deviations in, first, customer charges and, second, initial blocks of consumption. Ramsey Pricing, however, is neutral in direction of deviation. In the <u>usual</u> situation (electric, natural gas, telephone) where technological change provides marginal costs less than average unit revenue requirement, it is equally valid to deviate prices upward from marginal cost in inverse proportion to own price elasticity. In this situation, prices would deviate upward from

See Ramsey, F.P. 1927. A contribution to the theory of taxation. The Economic Journal Vol XXXVII (145), p. 47-61.
It is also puzzling that the faulty concept of exclusively increasing loads causing marginal costs is not proposed by HRC to apply on an interclass basis, as well. There one would find residential subscribers facing relatively higher prices in direct proportion to their relative growth. Industrial customers would face decreased prices commensurate with decreasing loads.

marginal costs in, first, customer charges, and then initial blocks of consumption. Furthermore, it is apparent that a rigid application of Ramsey Pricing theory should apply equally to the issue of interclass revenue reconciliation in sharp contrast to the Equiportional adjustment or Rule of Equity advocated by HRC.

63. Rate stability, Flexibility, and the Regional Marketplace. It is indisputably a goal of rate design efforts to provide an

element of continuity to prices -- more so for residential retail prices than any other prices. This continuity objective needs to be balanced with economic efficiency criterion. Whereas a strict application of Ramsey Pricing (interclass, as well, and in both directions) would result in a set of optimal prices, the record in Docket No. 83.9. 67 made clear that the load/resource balance is not optimal and the future is volatile. This raises the question: is the HRC proposal -- inverted rates with minimum bill provisions in lieu of customer charges -- intended as a long run restructuring of rates or is it intended to be a short run restructuring with expected flexibility to meet a moving target -- marginal costs as a function of constantly changing market conditions relative to an escalating average unit revenue requirement.

64. The Commission has found that the HRC proposal is not flexible. Once customers have been exposed to eliminated customer charges and discounted blocks of energy consumption, it is not advisable to go back, a short two or three years later, and explain customer charges of $4, $6, or $10 in combination with declining block rates -- results of a consistent application of a rigid pricing theory. Such short run swings in basic rate design are disruptive and counterproductive to customer acceptance and understanding.

65. Docket No. 83.9.67 has established that the existing load/resource balance features a substantial surplus. Some estimates conclude a regional surplus situation well beyond the year 2000. Whereas HRC maintains this is an opportune time to invert residential electric rates, the region's load/ resource balance indicates that it is not. Order No. 5051d arrived at a long run calculation of marginal costs which will be a basis for long run pricing decisions. That decision brought revenue requirements, avoided cost and rate design into balance. However,

the Commission simultaneously articulated its commitment to a least cost resource acquisition policy. The Commission has established a new avoided cost examination aimed at reflecting today's energy cost realities. To argue that now is the time to invert the residential rate appears to contradict the load/resource balance.

66. Minimum Bills. In one area the HRC motion is simply incorrect. The calculation of "minimum bill revenues" is no simple task. It requires an iterative calculation (of about 2.3 million bills) where "two unknowns" are featured in one equation. The resulting energy rate is a function of the quantity of KWH consumed in bills rendered at the minimum amount. However, the quantity of KWH consumed in the minimum is, in turn, a function of the energy rate.

67. Summary: HRC Motion. In Order No. 5051f the Commission rejected HRC's proposal based on:

1) what appears to be a very selective application of Ramsey Pricing,

2) its contradiction with HRC's own Rule of Equity,

3) the inflexibility of residential customer charges and energy rates,

4) rate continuity, and

5) its contradiction with the load/resource balance.

68. The MPSC has provided a rate structure which, unlike the HRC proposal, is equitable -- it charges all winter consumption a cost-based winter rate. The structure is stable. easily

understood, and easily calculated. It also is efficient. By lowering the customer charge below marginal cost and recognizing winter peaking costs, the structure provides the stable energy rates customers deserve while adequately following costs and the load/resource balance.

OTHER ISSUES

69. Residential Tariff. The Company provided a residential tariff in its October 8, 1984 Work papers. The Commission finds that the following language in the residential tariff sorely needs revision:

SPECIAL TERMS AND CONDITIONS: (1) When two or more apartments or residential dwelling units are wired to receive service through one meter, Schedule GS-84 Suppl #1 is applicable. As an alternative, when there is no demand meter installed, this Rate Schedule may be applied by multiplying the kWh in each block of the rate and the monthly service charge of $2.01 by the number of apartments or residential dwelling units so served. Service to the halls, basement or other common use portions of an apartment building or multiple dwelling building will be supplied under Schedule GS-84 Suppl.#1.

70. First, it should be clear that the first sentence needs revision given the Company's motion (Finding No. 9 above) in this regard. The first sentence should read: " (1) When two or more apartments or residential dwelling units are wired to receive service through one meter, and the expected demand exceeds 10 KW, then Schedule GS-84 Suppl. #1 is applicable. "

71. The Commission also finds that the second full sentence should be eliminated.

72. Irrigation Tariff. The Commission has concern over the Company's revision to the Commission's seasonal service charge set forth in Order No. 5051f. In Order No. 5051f, the Commission allowed the Company to recover this class' full marginal customer cost revenue requirement (computed as the annual average number of customers multiplied times the unit marginal customer cost). The resulting marginal cost revenue requirement was, in turn, divided by the average number of customers during the irrigation season(normally May through October).

73. The Company's August 8, 1984 Work papers (Derivation of Rates, p. 8 of 62) uses 2857 (from Rule 514680, p. 33) irrigation customers in lieu of the Commission's average number of customers during the irrigation season. The Commission finds this change appropriate.

74. Street lighting Tariff. In a letter dated October 16, 1984, MPC informed the Commission that "Due to the short time period available to implement the rate schedules per Order No. 5051f, the Company is unable to implement, in correct detail, the Streetlight Rate Schedules (SL-1 (84p) and SL-2 (84p)). " The Company's proposed resolution of this problem is to adjust upward (by roughly 50 percent) the existing tariff rate component, but on a temporary basis The Company estimates it will take about three months less to perform this conversion and provide correct billing for each streetlight type.

75. The Commission finds this proposal acceptable and encourages the Company to expedite the rate at which customers are switched from the old to the new tariff.

76. MPC Work papers. In its October 8, 1984 Work papers the Commission discovered a billing determinant that is inconsistent with the Company's August 20, 1984 Work papers. Specifically, the

Company has, other things being equal, an error in its Industrial Contract Summer 8 CP KW demand. It is the Commission's understanding that the 283,188 figure should actually be 275,355. This possible transcription error affects at least two separate marginal cost calculations (see pages 6 and 7 of the Marginal Cost tab of the October 8, 1984 Work papers). Any related KWH error should also be corrected.

CONCLUSIONS OF LAW

1. All Findings of Fact are hereby incorporated as Conclusions of Law.

2. The Applicant, Montana Power Company, furnishes electric service to consumers in Montana, and is a "public utility" under the regulatory jurisdiction of the Montana Public Service Commission. §69-3-101, MCA.

3. The Montana Public Service Commission properly exercises jurisdiction over Montana- Power Company's rates and operations. §69-3-102, MCA, and Title 69, Chapter 3, Part 3, MCA.

4. The Montana Public Service Commission has provided adequate public notice of all proceedings, and an opportunity to be heard to all interested parties in this docket. §69-3-303, MCA, §69-3-104, MCA, and Title 2, Chapter 4, MCA.

5. The cost of service and rate design approved herein is just, reasonable, and not unjustly discriminatory. §69-3-330, MCA and §69-3-201, MCA.

ORDER

THE MONTANA PUBLIC SERVICE COMMISSION HEREBY ORDERS:

1. All other motions or objections made in the course of these proceedings which are consistent with the findings, conclusions, and decision made herein are granted; those inconsistent are denied.

DONE AND DATED this 17th day of October, 1984 by a vote of 5 - 0.

BY ORDER OF THE MONTANA PUBLIC SERVICE COMMISSION

THOMAS J. SCHNEIDER, Chairman

JOHN B. DRISCOLL, Commissioner

HOWARD L. ELLIS, Commissioner

CLYDE JARVIS, Commissioner

DANNY OBERG , Commissioner

ATTEST:

Madeline L. Cottrill
Secretary
(SEAL)

Service Date: October 30, 1984

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA

IN THE MATTER Of The Application By) MONTANA POWER COMPANY For Authority) To Establish Increased Rates For) Electric Service In The State Of) Montana.)	UTILITY DIVISION DOCKET NO. 83.9.67 ORDER NO. 5051g

ERRATA SHEET

Finding of Fact Number 8 of Order No. 5051g incorrectly defines the winter and summer seasons. The excerpt from Order No. 5051f (Finding No. 44) should read:

The winter season for this and subsequent rate schedules should begin with the December billing cycle (roughly (December) November 20 each year) and end with the March billing cycle (roughly March

20 each year);all tariff sheets should reflect this generic seasonal definition (emphasis added).